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(54) System and method for automatically modifying database access methods to insert database object handling instructions

(57) A system and method for automatically converting a compiled program that accesses objects stored in main memory into a program that accesses and updates persistently stored objects. An initial computer program includes original instructions for accessing and updating objects in at least a first object class. The original instructions access and update objects in a computer's main memory. The system automatically revises the initial computer program to generate a revised computer program by adding to the original instructions object loading instructions and object storing instructions. During execution of the revised computer program, the object loading instructions load a copy of one of the persistently stored objects into a corresponding object in the computer's main memory when the object is accessed for a first time. The object storing instructions copy objects in the computer's main memory that contain new or modified data into corresponding persistently stored objects upon the occurrence of pre-defined events, such as the completion of a transaction. The system further revises the initial computer program to generate the revised computer program by adding to the original instructions dirty object marking instructions that, during execution of the revised computer program, keep track of which objects in the computer's main memory contain new and/or updated data. The object storing instructions copy only those of the objects in the computer's main memory that contain new and/or updated data.

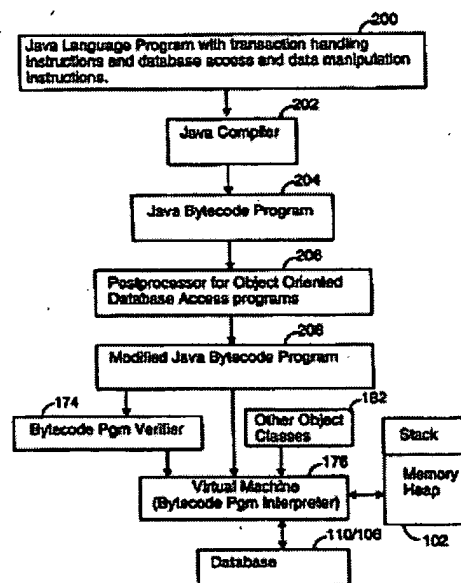


FIG. 3

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